

BIOGRAPHICAL INFORMATION

New Claims 6 - 10 replace now cancelled Claims 1 - 5. New Claims 10 and 11 replaces the use claim of now cancelled Claim 5. The Applicants respectfully submit that no new matter is added.

By 

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION: (Marked-Up)

The following are changes and additions made to the specification.

Kindly replace the Title Of The Invention with the following:

**[CARBOXYL GROUP-CONTAINING] DIENE RUBBERS CONTAINING
CARBOXYL GROUPS.**

IN THE ABSTRACT

Please replace page 16, a page containing an abstract with the enclosed page that contains a revised Abstract of the Disclosure. A separate page is enclosed herewith.

--DIENE RUBBERS CONTAINING CARBOXYL GROUPS

ABSTRACT OF THE DISCLOSURE

The present invention relates to rubber mixtures containing diene rubber with a concentration of carboxyl groups of 0.1 to 2 wt.% and a glass transition temperature of -120 to -50°C and their mixtures with fillers, optionally further rubbers and rubber auxiliary substances and vulcanisates prepared therefrom. Rubber mixtures according to the invention are suitable for producing highly reinforced, abrasion-resistant moulded items, in particular for producing tire treads which have a particularly high resistance to wet skidding, a high abrasion resistance and a low rolling resistance and also for tire sidewalls with especially good fatigue resistance.--

On page 1, line 3, kindly insert the following:

FIELD OF THE INVENTION

On page 1, line 12, kindly insert the following:

BACKGROUND OF THE INVENTION

On page 2, line 11, kindly insert the following:

SUMMARY OF THE INVENTION

On page 11, line 1, kindly insert the following:

--Table 1--

On page 11, kindly replace Table 1 with the following new Table 1.

	Comparison	Example
	2.A	2.1
in the kneader mixed:		
Buna VSL 5025-1 (37.5 phr mineral oil extended L-SBR, Bayer AG)	61[.]9	61[.]9
natural rubber	10	10
polybutadiene rubber Buna CB 45 (Bayer)	45	0
carboxylic group containing BR according example 1 (20 phr oil content)	0	54
mineral oil Enerthene 1849-1 (BP)	20	11
silica Vulkasil S (Bayer AG)	70	70
silane Si (69 (Degussa Hüls)	6	6
carbon black Corax N121 (Degussa Hüls)	10	10
zinc oxide	3	3
stearic acid	1	1
protective wax Antilux 654 (Rheinchemie)	1[.]5	1[.]5
antioxidant Vulkanox HS (Bayer AG)	1	1
antioxidant Vulkanox 4020 (Bayer AG)	1	1

On the mill admixed

N-cyclohexylmercaptobenzthiazolsulfenamide

Vulkacit CZ (Bayer AG)	1[.]8	1[.]8
diphenylguanidine Vulkacit D (Bayer AG)	2	2
sulfur	1[.]5	1[.]5

On page 12, line 1, kindly insert the following:

--Table--

On page 12, kindly replace Table 2 with the following new Table 2.

	Comparison	Example
	2.A	2.1
tensile strength (Mpa)	16[,].8	18[,].2
elongation at break (%)	450	330
modulus at 100%	2[,].4	2[,].9
modulus at 300% elongation (Mpa)	9[,].5	16[,].3
rebound elasticity at 70°C (%)	54	63
hardness (shore A)	66	66
tan delta at 70°C	0[,].138	0[,].108

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IN THE CLAIMS:

Kindly cancel Claims 1 - 5.

Kindly add the following new Claims:

- 6. A rubber mixture comprising one or more rubbers with 0.1 to 2 wt.% of bonded carboxyl groups or their salts and a glass transition temperature in the range from -120° to -50°C and one or more fillers in the range 10 to 500 parts by wt., with respect to 100 parts by wt. of rubber.
7. A rubber mixture according to Claim 1, wherein said rubber is formed from diolefins.
8. A process for preparing a rubber with 0.1 to 2 wt.% of bonded carboxyl group comprising the step, after polymerization in solution, of reacting rubber with carboxylmercaptans of the general formula (I)



in which

R^1 represents a linear, branched or cyclic $\text{C}_1\text{-C}_{36}$ alkylene group, which may optionally be substituted with up to 3 further carboxyl groups, or which may be interrupted by nitrogen, oxygen or sulfur atoms, or a $\text{C}_6\text{-C}_{12}$ -arylene group

and

X represents hydrogen or a metal or ammonium ion,

optionally in the presence of radical starters.

9. Molded items comprising rubber mixtures which comprise one or more rubbers with 0.1 to 2 wt.% of bonded carboxyl groups or their salts and a glass transition temperature in the range from -120° to -50°C and one or more fillers in the range 10 to 500 parts by wt., with respect to 100 parts by wt. of rubber.
10. Tires comprising rubber mixtures which comprise one or more rubbers with 0.1 to 2 wt.% of bonded carboxyl groups or their salts and a glass transition temperature in the range from -120° to -50°C and one or more fillers in the range 10 to 500 parts by wt., with respect to 100 parts by wt. of rubber.--